

12, 67

Work Order ID 140910

140910

Page 1

January 25, 2016 8:59:55 AM

Item ID: D2017-115 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: STEP STRUT

Start Date: 1/25/2016 Start Qty: 6.00 *6* Cust Item ID:

Required Date: 2/1/2016 Req'd Qty: 6.00 *6* Customer:

Reference:

Approvals: Process Plan: SA Date: 20160126 Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2017	Rev F								

100 0.00

100

Brake NC

Brake NC

Memo

Punch tube type 304-2B
Drill hole to 3/16" as per Dwg
and spec control D2638
Deburr

0.00

6 FF JAN 27 2016

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Quality Control

Memo

0.00

① DAS 38 9:38 FEB 03 2016

120

White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel

0.00

120

Powdercoat

Powder Coating

Memo

0.00

6 1602-H. DAS 34 9:38

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Page 2

Quality Control

DAS
38
9-8

6

4

FEB 04 2016 9:30

FEB 04 2016

MCS FEB 04 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

January 26, 2016 11:01:39 AM

Page 1

Work Order ID: 140910

140910

Parent Item: D2017-115

D2017-115

Parent Item Name: STEP STRUT

Start Date: 1/25/2016

Required Date: 2/1/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP E02.06.19 Added finishing level (Ref. ECN 435) KJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304TR0.750W.049

Purchased

No

f

93.4490

6.3

M304TR0 750W 049

FF JAN 27 2016

304 RD Tube .750 x .049W

Location

Loc Qty

Loc Code

GA002

86.4763132

M132270

0.00001

M133131

0.0007242

M133509

15.407579

M133700

11.985

M133914

59.083

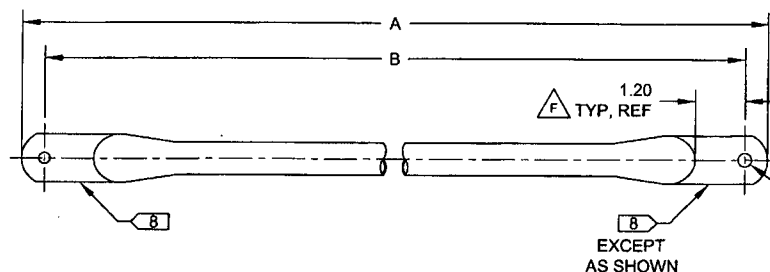
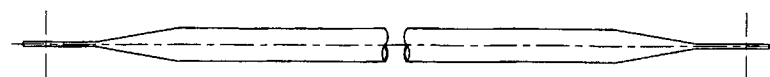
6.3

MAT

6.9727347

M133400

6.9727347



D2017-XXX STEP STRUT

PART NUMBER	A	B
D2017-101	17.73	16.93
D2017-103	18.74	17.94
D2017-113	20.50	19.70

NOTES:

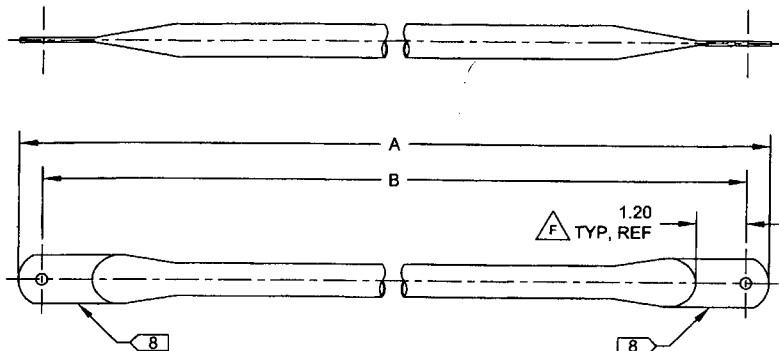
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE, Ø0.750 x 0.049 WALL
REF. DART SPEC M304TR0.750W.049
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2017-XXX" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: N/A
- 8) PUNCH ENDS PER SPEC CONTROL DRAWING D2638.

RELEASED
29/04/16

F	DRAWING TRANSFERRED TO "B" FORMAT AND TO CURRENT STANDARDS. REDRAWN FOR CLARITY 1.20 REF DIM ADDED. SEE PAR 09-002 FOR DETAILS.	AJS	09.03.06
E	ENDS PUNCHED PER SPEC CTRL; -119 CHANGE (TSR A897) ADD FINISH (INCORPORATE E1)	CP	02.03.22
D	ADDED PARTS	BW	96.03.28
C	ADDED PARTS	BW	95.01.26
REV.	DESCRIPTION	BY	DATE
DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2017	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		STEP STRUTS	NTS
DATE	09.03.06	COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS TO BE KEPT IN THE CONFIDENTIALITY OF THE COMPANY AND NOT TO BE USED FOR ANY PURPOSES (AN UNLESS OTHERWISE SPECIFIED) WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

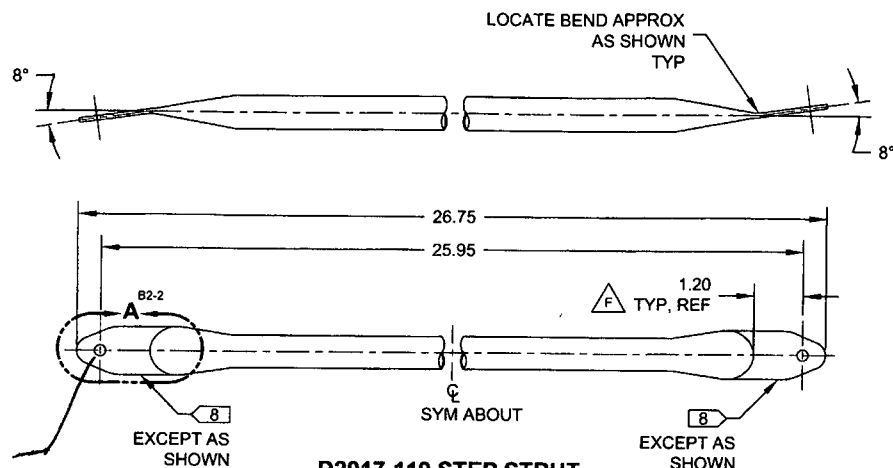
20160126

SA 140910



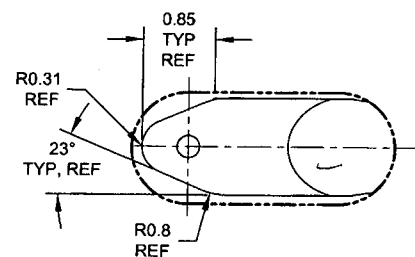
D2017-XXX STEP STRUT

PART NUMBER	A	B
D2017-105	14.95	14.15
D2017-107	15.61	14.81
D2017-109	13.93	13.13
D2017-111	15.30	14.50
D2017-115	12.42	11.62
D2017-117	13.86	13.06
D2017-121	12.30	11.50
D2017-123	12.92	12.12
D2017-125	19.55	18.75
D2017-127	20.30	19.50
D2017-129	31.43	30.63
D2017-131	19.68	18.88
D2017-201	21.31	20.51
D2017-203	16.39	15.59
D2017-205	16.53	15.73
D2017-207	13.85	13.05
D2017-209	15.64	15.33
D2017-211	15.67	14.87
D2017-213	15.82	15.02
D2017-215	16.47	15.67
D2017-217	16.70	15.90
D2017-219	13.65	12.85
D2017-221	13.58	12.78
D2017-223	12.95	12.15
D2017-225	13.99	13.19
D2017-227	30.67	29.87
D2017-133	30.66	29.86



D2017-119 STEP STRUT
(SHOWN PRIOR TO BENDING)

φ0.357 TYP
15/01/23



DETAIL A D4-2
TRIM AFTER PUNCHING PER DT8360
SCALE 2X

RELEASED
09/04/16

DESIGN	BW	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2017	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		STEP STRUTS	NTS
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